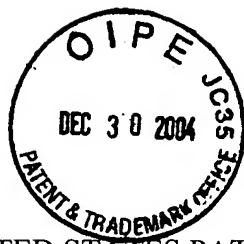


10/631,847



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : **Confirmation No. 1043**
Toshiyuki KOHARA et al. : Docket No. 2003_1088A
Serial No. 10/631,847 : Group Art Unit 1625
Filed August 1, 2003 : Examiner Charanjit Aulakh

DIHYDROPYRAZOLOPYRIDINE COMPOUNDS
AND PHARMACEUTICAL USE THEREOF

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

THE COMMISSIONER IS AUTHORIZED
TO CHARGE ANY DEFICIENCY IN THE
FEE FOR THIS PAPER TO DEPOSIT
ACCOUNT NO. 23-0975.

Sir:

Pursuant to the provisions of 37 CFR 1.56, 1.97 and 1.98, Applicants request consideration of the references listed on attached form PTO-1449 and any additional information identified below in paragraph 3. A legible copy of each reference listed on the Form PTO-1449 is enclosed, except a copy is not provided for:

- ☐ each U.S. Patent and U.S. Patent application publication;
- ☐ each reference previously cited in the international application PCT/_____; and/or
- ☐ each reference previously cited in prior parent application Serial No. _____.

1a. ☐ This Information Disclosure Statement is submitted:

within three months of the filing date (or of entry into the National Stage) of the above-entitled application, **or**

before the mailing of a first Office Action on the merits or the mailing of a first Office Action after the filing of an RCE,

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and thus no certification and/or fee is required.

- 1b. ☒ This Information Disclosure Statement is submitted

after the events of above paragraph 1a and prior to the mailing date of a final Office Action or a Notice of Allowance or an action which otherwise closes prosecution in the application, and thus:

(1) ☐ the certification of paragraph 2 below is provided, **or**

(2) ☒ the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.

- 1c. ☐ This Information Disclosure Statement is submitted:

after the mailing date of a final Office Action or Notice of Allowance or action which otherwise closes prosecution in the application, and prior to payment of the issue fee, and thus:

the certification of paragraph 2 below is provided, and

the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.

2. It is hereby certified

a. ☐ that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the Statement, or

b. ☐ that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in §1.56(c) more than three months prior to the filing of the Statement.

3. ☐ Consideration of the following list of additional information (including any copending or abandoned U.S. application, prior uses and/or sales, etc.) is requested.

4. For each non-English language reference listed on the attached form PTO-1449, reference is made to:
- a. ☐ a full or partial English language translation submitted herewith,
 - b. ☐ a foreign patent office search report (in the English language) submitted herewith,
 - c. ☐ the concise explanation contained in the specification of the present application at page,
 - d. ☐ the concise explanation set forth in the attached English language abstract,
 - e. ☐ the concise explanation set forth below or on a separate sheet attached to the reference:
5. ☐ A foreign patent office search report citing one or more of the references is enclosed.
6. ☐ Statement Under 37 CFR 1.704(d)

Each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign Patent Office in a counterpart application, and this communication was not received by any individual designated in §1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.

Respectfully submitted,

Toshiyuki KOHARA et al.

By Warren M. Cheek, Jr.
Warren M. Cheek, Jr.
Registration No. 33,367
Attorney for Applicants

WMC/dlk
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
December 30, 2004

INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

ATTY DOCKET NO.

2003_1088A

SERIAL NO.

10/631,847

LIST OF REFERENCES CITED BY APPLICANT(S)
(Use several sheets if necessary)

APPLICANT

Toshiyuki KOHARA et al.

Date Submitted to PTO: December 30, 2004

FILING DATE

August 1, 2003

GROUP

1625

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA						

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AB					

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

AI	M. Hoshi et al., "Regulation of mitochondrial pyruvate dehydrogenase activity by tau protein kinase I/glycogen synthase kinase 3 β in brain", Proc. Natl. Acad. Sci., Vol. 93, pp. 2719-2723, 1996.
AD	S. R. D'Mello et al., "Lithium induces apoptosis in immature cerebellar granule cells but promotes survival of mature neurons", Experimental Cell Research, No. 211, pp. 332-338, 1994.
AI	C. Volonte et al., Neurosci. Letters, Vol. 172, pp. 6-10, 1994.
AI	S. Nonaka et al., "Neuroprotective effects of chronic lithium on focal cerebral ischemia in rats", NeuroReport, Vol. 9, No. 9, pp. 2081-2084, 1998.
AI	S. B. Maggirwar et al., "HIV-1 Tat-Mediated activation of glycogen synthase kinase-3 β contributes to Tat-mediated neurotoxicity", Journal of Neurochemistry, Vol. 73, No. 2, pp. 578-586, 1999.
AH	V. Stambolic et al., "Lithium inhibits glycogen synthase kinase-3 activity and mimics wingless signalling in intact cells", Current Biology, Vol. 6, No.12, pp. 1664-1668, 1996.
AI	P. S. Klein et al., "A molecular mechanism for the effect of lithium on development", Proc. Natl. Acad. Sci., Vol. 93, pp. 8455-8459, 1996.
AI	G. Chen et al., "The mood-stabilizing agent valproate inhibits the activity of glycogen synthase kinase-3", Journal of Neurochemistry, Vol. 72, pp. 1327-1330, 1999.
AK	S. Nonaka et al., "Chronic lithium treatment robustly protects neurons in the central nervous system against excitotoxicity by inhibiting N-methyl-D-aspartate receptor-mediated calcium influx", Proc. Natl. Acad. Sci., Vol. 95, pp. 2642-2647, 1998.

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of form with next communication to applicant.

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)
(Use several sheets if necessary)

Date Submitted to PTO: December 30, 2004

ATTY DOCKET NO.
2003_1088ASERIAL NO.
10/631,847APPLICANT
Toshiyuki KOHARA et al.FILING DATE
August 1, 2003GROUP
1625

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	BA						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	BB						

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

	BC	C. R. Beals et al., "Nuclear export of NF-ATc enhanced by glycogen synthase kinase-3", Science, Vol. 275, pp. 1930-1933, 1997.
	BD	I. A. Graef et al., "L-type calcium channels and GSK-3 regulate the activity of NF-ATc4 in hippocampal neurons", Letters to Nature, Vol. 401, pp. 703-708, 1999.
	BE	A. J. Zhu et al., "β-catenin signalling modulates proliferative potential of human epidermal keratinocytes independently of intercellular adhesion", Development, Vol. 126, pp. 2285-2298, 1999.
	BF	S. T. Davis et al., "Prevention of chemotherapy-induced alopecia in rats by CDK inhibitors", Science, Vol. 291, pp. 134-137, 2001.
	BC	T. T. Lee et al., "Overexpression of cellular activity and protein level of protein kinase F _α /GSK-3β correlates with human thyroid tumor cell dedifferentiation", Journal of Cellular Biochemistry, Vol. 58, pp. 474-480, 1995.
	BH	K. P. Hoeflich et al., "Requirement for glycogen synthase kinase-3β in cell survival and NF-κB activation", Nature, Vol. 406, pp. 86-90, 2000.
	BI	S. A. Milligan et al., "Inhibition of NF-κB with proteasome inhibitors enhances apoptosis in human lung adenocarcinoma cells <i>in vitro</i> ", Anticancer Research, Vol. 21, pp. 39-44, 2001.
	BI	R. Romieu-Mourez et al., "Roles of IKK kinase and protein kinase CK2 in activation of nuclear factor-κB in breast cancer", Cancer Research, Vol. 61, pp. 3810-3818, 2001.
	BK	S. E. Nikoulina et al., "Potential role of glycogen synthase kinase-3 in skeletal muscle insulin resistance of type 2 diabetes", Diabetes, Vol. 49, pp. 263-271, 2000.
	BL	R. V. Bhat et al., "Regulation and localization of tyrosine ²¹⁸ phosphorylation of glycogen synthase kinase-3β in cellular and animal models of neuronal degeneration", Proc. Natl. Acad. Sci., Vol. 97, pp. 11074-11079, 2000.

EXAMINER

DATE CONSIDERED



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : **Confirmation No. 1043**
Toshiyuki KOHARA et al. : Atty Docket No. 2003_1088A
Serial No. 10/631,847 : Group Art Unit 1625
Filed August 1, 2003 : Examiner Charanjit Aulakh
DIHYDROPYRAZOLOPYRIDINE COMPOUNDS AND PHARMACEUTICAL USE THEREOF **Mail Stop: Amendment**

PATENT OFFICE FEE TRANSMITTAL FORM

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

THE COMMISSIONER IS AUTHORIZED
TO CHARGE ANY DEFICIENCY IN THE
FEE FOR THIS PAPER TO DEPOSIT
ACCOUNT NO. 23-0975.

Sir:

Attached hereto is a check in the amount of **\$180.00** to cover Patent Office fees relating to filing the following attached papers:

Information Disclosure Statement \$180.00

A duplicate copy of this paper is being submitted for use in the Accounting Division, Office of Finance.

The Commissioner is authorized to charge any deficiency or to credit any overpayment associated with this communication to Deposit Account No. 23-0975, with the EXCEPTION of deficiencies in fees for multiple dependent claims in new applications.

Respectfully submitted,

Toshiyuki KOHARA et al.

By Warren M. Cheek, Jr.
Warren M. Cheek, Jr.
Registration No. 33,367
Attorney for ApplicantS

WMC/dlk
WENDEROTH, LIND & PONACK, L.L.P.
2033 K St., N.W., Suite 800
Washington, D.C. 20006-1021
Telephone (202) 721-8200
December 30, 2004

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